



Fish Passage Center

Weekly Report #12 - 21

August 3, 2012

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 55% and 202% of average at individual sub-basins over July. Precipitation above The Dalles has been 131% of average over July. Over the 2012 water year, precipitation has ranged between 92% and 126% of average.

Table 1. Summary of July precipitation and cumulative October through July 23, 2012 precipitation with respect to average (1971-2000), at select locations within the Columbia and Snake River Basins.

Location	Water Year 2012 July 1-23, 2012		Water Year 2012 October 1, 2011 to July 23, 2012	
	Observed (inches)	% Average	Observed (inches)	% Average
	Columbia Above Coulee	1.68	127	26.76
SNAKE RIVER ABOVE ICE HARBOR	0.73	107	15.75	100
Columbia Above The Dalles	1.21	131	23.36	113
Kootenai	1.96	139	28.20	126
Clark Fork	0.96	109	16.69	111
Flathead	1.42	121	24.20	121
Pend Oreille/ Spokane	1.69	167	34.47	122
Central Washington	0.56	202	7.86	96
SNAKE RIVER PLAIN	0.51	114	9.22	92
Salmon/Boise/ Payette	0.43	73	17.94	98
Clearwater	1.12	104	31.60	113
SW Washington Cascades/Cowlitz	1.02	99	69.22	104
Willamette Valley	0.34	55	62.01	110

Table 2 displays the May 29th and July 30th Ensemble Streamflow Prediction (ESP) runoff volume forecasts for multiple reservoirs. The July 30th forecast at The Dalles between January and July is 129,029 Kaf (120% of average).

Table 2. May 29th and July 30th ESP Runoff Volume Forecasts for various reservoirs within the Columbia and Snake River Basins.

Location	May 29, 2012 ESP		July 30, 2012 ESP	
	% Average (1971 -2000)	Runoff Volume (Kaf)	% Average (1971 -2000)	Runoff Volume (Kaf)
The Dalles (Jan-July)	109	117424	120	129029
Grand Coulee (Jan-July)	113	71280	128	80321
Libby Res. Inflow, MT (Apr-Aug)	117	7281 7155*	148	9230
Hungry Horse Res. Inflow, MT (Jan-July)	103	2290	124	2751
Lower Granite Res. Inflow (Apr- July)	99	21410	105	22690
Brownlee Res. Inflow (Apr-July)	84	5275	87	5520
Dworshak Res. Inflow (Apr-July)	114	3024 3226*	126	3340

* Denotes COE Forecast

Grand Coulee Reservoir is at 1288.3 feet (8-1-12) and drafted 0.6 feet over the last week. Grand Coulee is currently 1.7 feet from full (1290 feet). Outflows at Grand Coulee have ranged between 186.7 and 212.0 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2457.8 feet (8-1-12) and has drafted 1.2 feet over the last week. Libby is currently 1.2 feet below full (2459 feet). Outflows at Libby Dam have ranged between 22.0-24.8 Kcfs last week.

Hungry Horse is currently at an elevation of 3557.7 feet (8-1-12) and has drafted 0.5 feet over the last week. Hungry Horse is currently 2.3 feet from full (3560 feet). Outflows at Hungry Horse have been 2.9-3.0 Kcfs last week.

Dworshak is currently at an elevation of 1573.2 feet (8-1-12) and has drafted 7.7 feet over the last week for temperature and flow augmentation. Outflows from Dworshak have ranged between 11.0-13.1 Kcfs the past week.

The Brownlee Reservoir was at an elevation of 2059.2 feet on July 31st, 2012 drafting 4.6 feet last week. Over the last week, outflows at Brownlee have ranged between 13.7 and 15.5 Kcfs.

The Biological Opinion summer flow objective at Lower Granite (June 21st to August 31st) is 52 Kcfs; over the summer period flows at Lower Granite have 53.6 Kcfs and 37.4 Kcfs over the last week.

The Summer Biological Opinion Flow Objective is 200 Kcfs at McNary Dam (began July 1st and will end August 31st). Over the summer period, flows at McNary have averaged 322.2 Kcfs and 272.7 Kcfs over the last week.

Spill:

The summer spill program began on June 21 in the Snake River and July 1 at the lower Columbia River projects, at projects where dates were not modified for research purposes.

Snake River flows have been steady over the past week and some excess generation spill has occurred. At Lower Granite Dam spill met, or exceeded, the Court Ordered summer spill level of 18 Kcfs. At Little Goose Dam spill met, or exceeded, the 30% of instantaneous flow level as specified in the Court Order, and ranged between 30% and 44% of daily average flow at this project. At Lower Monumental Dam the summer spill level of 17 Kcfs was met, or was exceeded. At Ice Harbor Dam the Court Order “test-like” conditions were completed as of July 13th and spill reverted back to the 45 Kcfs

during the day and gas cap spill during the night.

Project	Day/Night Spill
Lower Granite	18 Kcfs/18 Kcfs
Little Goose	30%/30%
Lower Monumental	17 Kcfs/17 Kcfs
Ice Harbor	45 Kcfs/gas cap

Summer spill for fish passage at the Lower Columbia projects began on July 1. Flows declined steadily in the lower Columbia River over the past week. Spill at McNary Dam changed to the summer level of 50% early to accommodate research studies and met, or exceeded, the Court Order as a result of flows in excess of hydraulic capacity due to unit outages and due to spill in excess of generation needs. Spill at John Day Dam met, or exceeded, the 30% instantaneously. At The Dalles Dam, spill was near the 40% daily spill level over several days of the past week, but not always near the hourly measurements due to the management of spill at The Dalles Dam to control TDG at the Bonneville dam forebay monitor. Spill at Bonneville Dam completed the summer test levels comparing 95 Kcfs for 24 hours versus 85 Kcfs during daytime hours and gas cap spill at night on July 20th. Spill from July 21st to the end of August will be 75 Kcfs during the day and gas cap spill at night. Spill generally met, or exceeded, these levels.

Project	Day/Night Spill
McNary	50%/50%
John Day	30%/30%
The Dalles	40%/40%
Bonneville	75 Kcfs/gas cap

Gas bubble trauma samples were taken this past week at Little Goose, Lower Monumental, McNary, Rock Island and Bonneville dams. There were no signs of GBT detected in the samples this past week at Little Goose, Lower Monumental, and Bonneville dams. At McNary Dam there were 1% of the fish in the sample on July 29th with minor signs of GBT. At Rock Island there were 1% of the fish in the sample with minor signs of GBT on August 2nd. All incidents were below the action criteria of 15%.

Smolt Monitoring:

Smolt monitoring activities are ongoing at all seven SMP dams (BON, JDA, MCN, LGR, LGS, LMN, and RIS). The Imnaha River Trap is the only SMP trap that is still collecting juvenile salmonids for the 2012 season.

Subyearling Chinook were the dominant species of salmonid at all SMP dams over the past week. When compared to last week, subyearling Chinook passage decreased at most the SMP sites this week, except Little Goose and Lower Monumental dams. The SMP sites continue to collect very few spring migrants.

Subyearling Chinook numbers at BON decreased this week, with a daily average passage index of nearly 20,000 per day, compared to last week's daily average passage index of about 58,000. Sockeye and yearling Chinook were the only spring migrants collected at BON this week. Only pacific lamprey macrophthalmia were collected at BON this week. The daily collections for pacific lamprey macrophthalmia were variable this week, ranging from 0 to 200 per day. Due to anticipated repairs to the Gantry crane at BON, the Corps of Engineers has pulled screens from the juvenile bypass system at the second powerhouse. All screens, except three (units 11, 12, and 18), are expected to be pulled and will remain out for the remainder of the 2012 SMP season. This may result in bias collection estimates, as not as many fish will be guided into the juvenile bypass system in the second powerhouse.

Passage of subyearling Chinook at JDA continued to decrease this week. The daily average passage index for subyearling Chinook at JDA this week was about 48,000 per day, compared to 102,000 per day last week. Sockeye, coho and yearling Chinook were the only spring migrants collected at JDA this week. Collections of pacific lamprey decreased this week. The daily average collection for pacific lamprey at JDA this week was about 1,400 per day, compared to about 1,800 per day last week.

Passage of subyearling Chinook at MCN decreased this week, when compared to last week. The daily average passage index for subyearling Chinook at MCN this week was just over 90,000 per day, compared to 108,000 per day last week. Passage of pacific lamprey decreased this week. This week's daily average collection for pacific lamprey at MCN was about 570 per day, compared to 1,025 per day last week.

Subyearling Chinook passage at LGR decreased this week, when compared to last week. The daily average passage index for subyearling Chinook at LGR this week was about 1,500 per day. Last week's daily average passage index for subyearling Chinook was just over 2,750 per day. Sockeye and steelhead were the only spring migrants collected at LGR this week. However, given that Dworshak Dam has been spilling up to 3 Kcfs since July 10th, these sockeye juveniles may be kokanee from Dworshak reservoir.

When compared to last week, passage of subyearling Chinook at LGS and LMN increased this week. The daily average passage index for subyearling Chinook at LGS this week was nearly 2,100 per day, compared to almost 2,000 per day last week. This week's daily average passage index for subyearling Chinook at LMN was about 720 per day, compared to 460 per day last week. Lamprey collections at LMN and LGS were low this week.

Passage of subyearling Chinook at RIS decreased this week. This week's daily average passage index for subyearling Chinook at RIS was 416 per day, compared to 491 per day last week. Coho, sockeye, and steelhead were the only spring migrants collected at RIS this week. Finally, only a few pacific lamprey were collected at RIS this week.

The most recent data that we have from the Imnaha River Trap this week are from July 20 and 31. On July 20th, thirteen yearling Chinook and two steelhead juveniles were collected. On other dates two to three yearling Chinook and/or steelhead were collected per day.

Hatchery Release:

Snake River Zone: The Snake River Zone encompasses the Snake River and its tributaries from its confluence with the Columbia River to Hells Canyon Dam. There were no new releases of juvenile salmonids scheduled for this zone this week. In addition, there are no releases scheduled for this zone over the next two weeks.

Mid-Columbia Zone: The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. No new releases of juvenile salmonids were scheduled to begin in this zone this week. There are also no releases of juvenile salmonids in this zone over the next two weeks.

Lower Columbia Zone: The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. No new

releases of juvenile salmonids were scheduled for this zone this week. Furthermore, there are no new releases to this zone scheduled over the next two weeks.

Adult Fish Passage:

Fall Chinook began to pass Bonneville Dam on August 1st. Daily counts of fall Chinook at Bonneville Dam ranged from 459 to 722. The adult fall Chinook count of 1,181 is about 1.22 times greater than the 2011 count of 970 and about 1.52 times greater than the 10 year average count of 778. The 2012 Bonneville Dam fall Chinook jack count of 386 is about 97.4% of the 2011 count of 396, while being 2.7 times greater than the 10 year average count of 143. The 2012 summer Chinook count of 81,663 is about 75.4% of the 2011 count and 88.3% of the 10 year average count. The 2012 Bonneville Dam summer Chinook jack count of 12,235 is about 23.8% of the 2011 count and 70.9% of the 10 year average count. At McNary Dam 62,245 adult summer Chinook have been counted. The 2012 McNary adult summer Chinook is about 87.2% of the 2011 and 93.8% of the 10 average counts. The McNary jack summer Chinook count of 4,733 is about 17.3% of the 2011 count of 27,330 and about 44% of the 10 year average count of 10,754. The 2012 adult summer Chinook count at Lower Granite Dam in the Snake River of 12,508 is about 35.1% of the 2011 count and 75% of the 10 year average count. The 2012 Lower Granite summer Chinook jack count of 1,616 is about 10% of the 2011 count and 29.2% of the 10 year average count.

The Bonneville Dam 2012 steelhead count of 94,366 is about 77.5% of the 2011 count of 121,823 and about 76.3% of the 10 year average count of 123,594. The 2012 Bonneville wild adult steelhead count of 40,763 is about 70.4% of the 2011 count of 57,904 and about 78.7% of the 10 year average count of 51,779. In the Snake River, this year's Lower Granite steelhead count of 10,301 is about 64.1% of the 2011 count of 16,072 and 73.1% of the 10 year average of 14,087. The 2012 Lower Granite wild adult steelhead count of 4,545 is about 62.2% of the 2011 count of 7,304 and 97.2% of the 10 year average count of 4,676. At Willamette Falls Dam, the 2012 count for steelhead was 28,668, as of July 28th. This year's steelhead count is about 1.06 times greater than the 2011 count of 26,913 and 1.07 times greater than the 10 year average count of 26,657.

Daily adult sockeye passage numbers at

Bonneville Dam ranged between 17 and 81 last week. The 2012 accumulated total adult sockeye count at Bonneville Dam of 515,547, as of 8/2/2012, is about 2.77 times greater than the 2011 count of 185,685 and about 3.94 times greater than the 10 year average count of 130,900. The 2012 McNary Dam adult sockeye count of 363,912 is about 3.21 times greater than the 2011 count of 113,477 and 3.9 times greater than the 10 year average count of 93,184. Two of the major spawning sites for sockeye in the Upper Columbia River zone are Lake Wenatchee and Lake Osoyoos (Okanogan basin). In the Snake River at Ice Harbor Dam, the 2012 adult sockeye count of 449 is 40.4% of the 2011 count of 1,112, while being 1.15 times greater than the 10 year average count of 389. The Lower Granite Dam 2012 adult sockeye count of 430 is about 29.5% of the 2011 count of 1,457 and about 76.6% of the 10 year average count of 561.

The coho salmon run at Bonneville Dam is just beginning with 9 adults and 4 jacks counted to date. As of August 2nd at Bonneville Dam, the adult shad count was 2,429,720. This year's shad count is about 3.21 times greater than the 2011 count of 945,953, while being 82.8% of the 10 year average count of 2,934,335.

Hatchery Releases Last Two Weeks

No releases to report.

Hatchery Releases Next Two Weeks

No releases to report.

Daily Average Flow and Spill (in kcfs) at Mid-Columbia Projects

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
07/20/2012	249.0	30.1	248.3	102.5	263.3	91.3	265.9	102.8	272.9	68.1	286.2	173.3	288.8	197.8
07/21/2012	248.9	30.0	246.1	94.1	263.0	85.5	264.6	97.6	272.6	66.1	290.6	156.0	291.9	205.2
07/22/2012	248.5	30.0	244.2	96.5	256.5	87.3	259.3	96.9	265.8	63.2	284.9	149.3	286.6	187.9
07/23/2012	240.3	30.0	242.9	100.4	255.0	86.9	257.1	96.1	264.0	65.8	278.9	165.4	282.1	165.4
07/24/2012	238.2	30.0	242.2	100.5	254.9	80.1	254.8	86.3	249.5	61.7	268.4	139.5	266.1	151.6
07/25/2012	225.8	15.1	229.4	93.1	244.4	69.9	248.0	90.2	239.0	57.0	265.2	128.7	266.2	146.0
07/26/2012	211.9	3.1	216.7	72.9	229.1	45.7	227.7	66.1	219.3	47.5	248.2	116.1	250.7	128.2
07/27/2012	212.0	5.1	207.8	84.1	223.3	44.1	224.0	69.2	218.8	47.3	233.7	118.4	229.6	99.1
07/28/2012	201.6	0.6	198.4	50.4	215.1	44.5	215.1	71.4	213.7	42.2	240.3	118.4	237.8	99.7
07/29/2012	197.0	0.1	193.9	26.3	203.6	33.9	200.4	62.2	196.4	41.0	204.6	72.5	212.3	92.1
07/30/2012	197.3	0.1	198.3	42.0	214.0	34.0	210.3	72.6	205.2	39.7	223.2	88.9	223.0	87.6
07/31/2012	189.3	0.2	191.0	29.6	202.0	25.3	199.5	44.3	199.4	40.9	213.3	81.3	213.6	87.5
08/01/2012	186.7	0.1	189.4	27.1	199.9	21.0	199.0	32.6	197.7	38.8	212.9	79.7	214.5	95.4
08/02/2012	181.2	0.2	177.2	10.7	191.3	16.3	190.2	27.5	189.3	40.1	202.7	67.2	187.4	79.8

Daily Average Flow and Spill (in kcfs) at Snake Basin Projects

Date	Dworshak		Hells Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
07/20/2012	11.5	1.9	10.9	15.3	41.6	20.3	39.7	15.8	38.7	18.4	40.8	30.3
07/21/2012	12.8	3.2	10.1	13.2	44.6	22.4	44.8	18.9	45.9	19.6	49.3	39.6
07/22/2012	12.7	3.1	10.5	11.6	39.3	21.0	40.2	17.9	39.5	20.6	41.7	31.5
07/23/2012	12.9	3.3	10.4	12.9	38.3	19.1	37.2	13.0	37.5	16.4	37.1	27.3
07/24/2012	13.1	3.4	10.4	13.1	37.7	18.4	37.2	11.1	35.0	17.0	38.2	28.4
07/25/2012	13.1	3.5	9.6	14.5	37.6	18.8	37.1	11.1	37.7	16.9	39.1	29.3
07/26/2012	13.1	3.5	9.6	15.9	39.5	18.5	40.1	12.0	39.9	17.0	42.2	31.7
07/27/2012	13.0	3.3	9.5	15.5	40.6	19.3	41.5	16.5	40.5	18.0	43.0	32.8
07/28/2012	11.1	1.4	9.6	13.3	37.7	20.1	36.2	15.9	35.7	19.0	37.5	27.2
07/29/2012	10.9	1.2	8.7	14.3	33.7	18.3	33.0	13.7	32.0	16.6	33.3	23.3
07/30/2012	13.0	3.3	8.1	15.2	36.2	18.4	34.4	12.0	33.6	22.5	34.3	24.3
07/31/2012	13.0	3.2	7.9	15.1	38.5	18.3	39.3	12.9	41.5	17.0	44.5	34.3
08/01/2012	13.0	3.2	8.3	13.5	35.6	18.3	34.6	10.5	32.6	17.0	33.1	23.2
08/02/2012	13.1	3.2	---	---	34.7	18.3	35.1	10.5	35.0	16.6	36.6	26.1

Daily Average Flow and Spill (in kcfs) at Lower Columbia Projects

Date	McNary		John Day		The Dalles		Bonneville		PH1	PH2
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill		
07/20/2012	323.5	188.4	307.6	102.7	288.5	115.9	292.1	98.3	82.8	98.6
07/21/2012	340.1	201.3	335.4	120.2	320.1	137.7	343.7	135.8	85.2	110.4
07/22/2012	333.3	194.1	329.3	138.0	312.1	136.7	334.0	130.2	85.4	106.1
07/23/2012	324.3	193.4	325.7	112.6	308.3	128.3	328.8	132.2	75.7	108.4
07/24/2012	310.9	184.7	307.9	92.6	291.1	116.2	309.4	159.1	48.1	89.9
07/25/2012	284.5	158.5	288.8	86.6	273.2	109.0	281.3	98.8	71.5	98.6
07/26/2012	308.3	179.5	298.9	89.7	284.3	106.2	291.6	100.9	80.5	97.8
07/27/2012	286.4	153.2	280.1	97.0	265.1	105.0	291.9	96.7	83.8	99.0
07/28/2012	257.3	138.5	251.0	93.0	236.9	103.0	258.1	88.3	76.0	81.4
07/29/2012	273.0	141.9	260.9	105.6	241.1	104.3	264.6	90.1	73.0	89.1
07/30/2012	264.2	145.0	253.0	109.3	237.2	101.8	242.4	119.9	76.1	34.0
07/31/2012	266.9	141.3	269.5	116.8	256.1	110.3	263.2	138.4	83.6	28.8
08/01/2012	252.5	126.4	245.1	74.1	230.1	92.1	259.2	95.6	78.7	72.5
08/02/2012	238.5	119.8	239.9	72.0	226.4	90.2	232.2	89.6	61.2	68.9

Total Dissolved Gas Saturation (%) - Average of 12 Highest Hours, 24 h Average and 24 h High

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	<u>Hungry H. Dnst</u>			<u>Boundary</u>			<u>Grand Coulee</u>			<u>Grand C. Tlwr</u>			<u>Chief Joseph</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
7/20	106.6	106.8	107.3	24	122.9	123.6	124.4	23	121.8	122.3	122.9	24	119.3	119.7	120.1	23	118.4	118.8	119.3	24
7/21	106.3	106.6	106.7	24	122.5	122.8	123.2	23	120.7	121.0	121.2	24	118.5	119.0	119.4	23	118.2	118.6	118.9	24
7/22	106.4	106.6	106.8	24	121.6	121.6	122.5	12	120.7	121.1	121.3	24	119.2	119.5	119.8	22	119.2	119.7	120.1	24
7/23	106.4	106.6	106.9	24	120.3	120.5	121.0	13	120.1	120.4	120.9	24	118.5	118.7	119.1	23	118.1	118.3	118.6	24
7/24	106.0	106.3	106.6	24	119.9	120.1	120.4	22	120.3	120.7	121.0	24	118.3	118.7	119.1	21	118.3	118.9	119.5	24
7/25	106.1	106.5	106.9	24	119.4	119.6	120.3	22	120.1	120.3	120.5	24	117.7	118.0	118.4	22	118.8	119.4	119.9	24
7/26	106.1	106.2	106.7	15	119.1	119.1	120.4	13	119.8	119.9	120.4	14	117.8	117.9	118.2	13	118.4	118.8	119.3	24
7/27	106.6	106.7	107.1	17	119.5	119.6	120.5	13	120.5	120.6	120.9	15	118.0	118.0	118.5	13	118.2	118.7	119.3	24
7/28	106.2	106.4	106.9	24	118.8	119.4	120.0	21	119.7	119.8	120.0	24	117.0	117.5	118.1	21	117.6	117.9	118.4	24
7/29	105.8	106.1	106.4	24	119.0	119.3	120.1	22	119.3	119.4	119.7	24	116.8	117.3	117.6	22	117.7	118.3	118.7	24
7/30	106.0	106.4	106.6	24	118.8	119.5	120.7	22	119.1	119.2	119.4	24	116.8	117.1	117.6	22	117.8	118.2	118.7	24
7/31	106.1	106.5	106.7	24	117.4	117.9	118.5	20	118.6	118.8	119.1	24	116.3	116.6	117.3	20	117.1	117.4	117.8	24
8/1	106.1	106.6	106.9	24	115.9	116.5	117.8	23	118.5	118.8	119.0	24	114.7	115.8	116.6	23	116.6	116.9	117.3	24
8/2	106.3	106.5	106.8	24	114.7	115.2	116.4	23	118.2	118.4	118.6	22	115.0	115.6	115.9	23	116.2	116.5	116.9	24

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	<u>Chief J. Dnst</u>			<u>Wells</u>			<u>Wells Dwnstrm</u>			<u>Rocky Reach</u>			<u>Rocky R. Tlwr</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
7/20	119.4	120.1	120.7	24	118.2	119.0	119.7	24	127.7	128.2	128.8	24	123.8	124.3	124.8	24	119.7	120.3	120.9	24
7/21	119.0	119.4	120.2	24	118.4	118.9	119.0	24	127.0	127.6	128.0	24	123.8	124.9	125.5	24	120.4	120.8	121.1	24
7/22	119.2	119.7	120.2	24	119.0	119.7	120.2	24	128.2	129.3	130.4	24	124.4	124.7	125.4	24	120.7	121.4	122.1	24
7/23	120.0	120.4	121.4	24	117.2	118.3	119.1	24	126.8	127.2	127.6	24	122.5	123.2	124.0	24	119.5	120.2	121.2	24
7/24	120.1	120.3	120.5	24	119.3	119.9	120.1	24	127.0	127.5	128.0	24	123.4	124.4	125.1	24	119.0	119.4	119.9	24
7/25	119.1	119.9	121.8	24	119.8	120.3	120.7	24	126.3	127.5	127.9	24	124.5	124.8	125.3	24	119.1	119.9	121.3	24
7/26	117.6	118.2	119.3	24	118.7	119.2	119.9	24	122.5	123.4	123.9	24	123.4	124.3	125.0	24	118.0	118.6	119.1	24
7/27	118.3	118.9	119.3	24	117.5	117.9	118.1	24	120.9	121.7	122.7	24	120.2	120.9	121.5	24	117.1	117.6	118.2	24
7/28	116.4	117.3	118.0	24	117.5	117.8	118.1	24	120.7	121.1	121.6	24	118.0	118.3	118.6	24	116.3	116.7	117.0	24
7/29	115.0	115.7	115.8	24	116.6	116.8	117.0	23	119.1	119.8	120.3	23	118.5	118.9	119.1	24	115.8	116.4	117.6	24
7/30	115.9	117.1	120.2	24	116.4	116.7	116.9	23	118.6	119.0	119.5	23	117.7	118.3	118.8	24	117.3	118.1	118.8	24
7/31	113.6	114.5	116.3	24	116.0	116.4	116.9	24	117.5	117.8	118.0	24	116.4	116.7	117.0	24	114.8	115.4	116.7	24
8/1	113.0	113.5	113.8	24	115.3	115.5	115.8	24	116.8	117.5	118.3	24	115.7	115.9	116.2	24	113.6	114.2	114.9	24
8/2	114.2	115.3	115.7	24	115.0	115.4	115.6	24	116.0	116.6	117.5	24	115.2	115.8	116.1	24	113.0	113.6	114.0	24

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	<u>Rock Island</u>			<u>Rock I. Tlwr</u>			<u>Wanapum</u>			<u>Wanapum Tlwr</u>			<u>Priest Rapids</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
7/20	122.6	123.5	124.1	24	124.5	124.7	124.9	24	121.9	123.2	123.9	24	128.7	129.5	131.2	24	123.8	126.2	129.3	24
7/21	123.9	124.6	125.2	24	124.0	124.2	124.4	24	121.3	122.6	123.2	24	126.8	127.5	128.6	24	123.3	125.4	126.4	24
7/22	124.2	125.0	125.9	24	124.7	124.9	125.1	24	123.6	124.9	126.2	24	126.5	127.9	128.6	24	123.4	124.5	125.0	24
7/23	122.4	123.2	123.8	24	119.5	124.0	124.4	16	119.7	119.8	120.2	24	128.0	128.6	129.2	24	124.1	126.7	127.3	24
7/24	122.8	123.5	123.8	24	122.8	122.8	124.8	10	122.9	124.3	125.7	24	125.6	126.2	126.7	24	123.5	124.8	125.4	24
7/25	123.9	124.4	125.0	24	125.6	126.0	126.4	24	124.4	125.4	126.5	24	124.1	125.8	129.1	24	124.1	126.2	129.5	24
7/26	123.1	123.6	124.2	24	124.7	125.3	125.8	24	125.1	126.1	127.6	24	123.1	123.9	126.8	24	122.5	124.1	126.6	24
7/27	120.4	121.1	121.4	24	122.4	123.3	123.7	24	122.6	123.2	123.5	24	124.0	124.8	125.5	24	120.4	121.6	122.3	24
7/28	119.0	119.9	120.5	24	121.2	122.3	122.8	24	118.9	119.7	120.4	24	122.5	123.3	124.5	24	120.8	122.2	123.6	24
7/29	118.6	119.3	119.7	24	120.5	121.8	122.4	24	118.9	119.9	120.8	24	117.8	118.8	119.9	24	118.5	119.0	120.8	24
7/30	119.4	120.3	121.1	24	121.8	122.4	122.7	24	---	---	---	0	---	---	---	0	---	---	---	0
7/31	117.1	117.7	118.4	24	120.2	120.8	121.0	24	---	---	---	0	---	---	---	0	---	---	---	0
8/1	116.1	116.7	117.0	24	119.1	119.9	120.3	24	---	---	---	0	---	---	---	0	---	---	---	0
8/2	115.4	116.4	117.3	24	118.7	120.1	120.7	24	---	---	---	0	---	---	---	0	---	---	---	0

Total Dissolved Gas Saturation (%) - Average of 12 Highest Hours, 24 h Average and 24 h High

Total Dissolved Gas Saturation Data at Lower Columbia and Snake River Sites

Date	<u>Priest R. Dnst</u>			<u>Pasco</u>			<u>Dworshak</u>			<u>Clwrtr-Peck</u>			<u>Anatone</u>							
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#		
	Avg	Avg		High	Avg		Avg	High		Avg	Avg		High	Avg		Avg	High		Avg	Avg
7/20	124.4	124.8	125.0	24	116.8	117.1	117.3	24	105.5	108.5	110.0	24	105.4	108.0	110.0	24	101.7	102.1	102.6	24
7/21	124.3	125.0	125.3	24	117.3	118.5	119.0	24	108.3	108.8	109.1	24	107.4	108.6	109.4	24	101.9	103.0	103.9	24
7/22	124.4	124.8	125.2	24	118.1	119.0	119.7	24	108.5	109.0	109.7	24	107.8	109.0	109.9	24	102.4	103.5	104.6	24
7/23	124.0	124.6	124.9	24	116.3	117.5	118.2	24	108.4	108.9	109.4	24	107.4	108.5	109.5	24	101.5	102.5	103.5	24
7/24	123.8	124.1	124.8	24	118.2	119.4	120.2	24	109.0	109.4	109.9	24	107.8	108.7	109.6	24	102.1	103.3	104.3	24
7/25	124.2	124.6	125.3	24	118.0	119.3	120.1	24	109.2	109.5	109.6	24	108.0	109.0	109.9	24	102.3	103.5	104.6	24
7/26	123.3	123.7	124.4	24	117.9	118.3	118.9	17	109.3	109.4	109.9	15	107.5	107.5	108.7	13	101.7	101.8	103.7	14
7/27	121.7	122.2	122.9	24	116.9	117.6	118.2	24	109.1	109.3	109.5	18	107.6	108.6	109.6	24	102.3	103.0	104.0	19
7/28	121.4	122.5	123.0	24	114.7	115.6	116.2	24	103.6	104.1	107.4	24	104.0	105.1	106.1	24	101.6	102.7	103.7	24
7/29	120.2	120.6	122.1	24	115.7	117.1	117.8	24	102.8	103.1	103.4	24	102.9	104.0	105.1	24	101.8	103.1	104.2	24
7/30	---	---	---	0	114.5	115.4	116.2	24	108.0	108.6	109.0	24	106.5	107.9	109.0	24	101.9	103.0	104.2	24
7/31	---	---	---	0	113.9	115.2	115.8	24	108.2	108.7	108.9	24	106.9	108.0	109.1	24	101.8	103.0	104.1	24
8/1	---	---	---	0	114.0	115.2	115.8	24	108.2	108.6	108.9	24	106.9	107.9	108.7	24	101.9	103.1	104.4	24
8/2	---	---	---	0	113.5	114.4	115.1	22	108.5	108.9	109.2	23	106.8	107.7	108.7	22	101.7	102.8	103.9	22

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clwrtr-Lewiston</u>			<u>Lower Granite</u>			<u>L. Granite Tlwr</u>			<u>Little Goose</u>			<u>L. Goose Tlwr</u>							
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#		
	Avg	Avg		High	Avg		Avg	High		Avg	Avg		High	Avg		Avg	High		Avg	Avg
7/20	102.9	104.3	105.3	24	102.5	102.9	103.5	24	116.1	117.2	118.9	24	112.8	112.9	113.2	24	113.1	113.6	114.2	24
7/21	105.3	107.7	109.2	24	102.3	102.8	103.3	24	116.3	117.5	118.8	24	112.6	112.8	113.0	24	114.1	115.1	116.6	24
7/22	105.6	108.0	109.8	24	102.3	102.5	102.8	24	116.5	117.5	118.5	24	112.3	112.5	112.7	24	113.1	114.3	115.4	24
7/23	104.8	107.3	108.8	24	100.7	101.0	101.6	24	115.8	116.4	116.8	24	111.0	111.3	111.8	24	111.9	112.1	112.5	24
7/24	105.3	107.9	109.5	24	100.5	100.6	100.8	24	115.6	116.0	116.3	24	110.0	110.1	110.5	24	111.7	112.0	112.6	24
7/25	105.5	108.0	109.5	24	101.5	101.9	102.1	24	116.3	116.9	117.9	24	109.5	109.7	109.8	24	112.1	112.5	112.7	24
7/26	104.1	104.9	107.5	17	102.1	102.1	102.2	17	115.8	116.1	116.6	17	109.4	109.5	109.6	17	112.1	112.2	112.7	17
7/27	105.3	107.4	109.1	24	102.0	102.2	102.5	24	115.9	116.7	118.2	24	109.4	109.5	109.5	24	112.6	113.1	113.8	24
7/28	104.4	106.3	107.7	24	101.9	102.2	102.4	24	116.3	116.9	118.7	24	110.5	110.8	111.0	24	112.7	113.2	114.4	24
7/29	103.5	105.9	107.5	24	102.4	102.8	103.0	24	116.1	116.5	117.2	24	111.7	112.2	112.5	24	113.0	113.5	113.9	24
7/30	104.4	107.0	108.8	23	103.0	103.2	103.3	24	115.8	116.3	116.6	24	111.1	111.3	111.8	24	112.8	113.1	113.4	24
7/31	104.8	107.0	108.6	24	102.4	102.6	102.9	24	115.3	115.7	116.0	24	111.1	111.3	111.6	24	112.6	113.1	113.3	24
8/1	104.7	107.0	108.6	24	101.9	102.0	102.1	24	115.5	115.8	116.7	24	111.4	111.9	112.7	24	112.7	113.4	113.9	24
8/2	104.5	106.5	108.0	22	101.7	101.9	102.1	22	115.6	115.9	116.4	22	113.1	113.3	113.6	22	113.5	113.9	114.3	22

Total Dissolved Gas Saturation Data at Snake and Lower Columbia River Sites

Date	<u>Lower Mon.</u>			<u>L. Mon. Tlwr</u>			<u>Ice Harbor</u>			<u>Ice Harbor Tlwr</u>			<u>McNary-Oregon</u>							
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#		
	Avg	Avg		High	Avg		Avg	High		Avg	Avg		High	Avg		Avg	High		Avg	Avg
7/20	112.5	113.1	113.4	24	116.1	116.8	117.4	24	112.3	112.8	113.2	24	114.0	114.4	114.8	24	---	---	---	0
7/21	111.2	111.5	111.7	24	116.8	117.8	119.3	24	111.3	111.7	111.9	24	114.3	114.9	115.6	24	---	---	---	0
7/22	110.9	111.1	111.3	24	126.0	134.4	138.4	24	112.0	112.4	112.7	24	114.1	114.8	115.2	24	---	---	---	0
7/23	109.8	110.0	110.3	24	125.5	135.1	137.6	24	110.0	110.2	110.6	24	113.2	114.2	115.0	24	---	---	---	0
7/24	110.8	111.1	111.3	24	116.8	117.1	117.5	24	111.1	111.8	112.4	24	113.3	113.9	114.7	24	---	---	---	0
7/25	111.0	111.2	111.4	24	116.6	116.9	117.3	24	111.3	111.5	111.8	24	113.7	114.2	114.8	24	---	---	---	0
7/26	110.8	110.9	111.0	17	116.3	116.4	116.9	14	111.0	111.2	111.6	17	113.9	114.0	114.7	17	---	---	---	0
7/27	111.3	111.7	112.4	24	116.9	117.3	117.7	22	112.2	112.5	113.7	24	113.8	114.4	115.0	24	---	---	---	0
7/28	110.5	110.5	110.7	24	116.6	117.0	117.6	24	112.0	112.2	112.5	24	113.8	114.5	115.1	24	---	---	---	0
7/29	110.1	110.3	110.4	24	116.5	116.8	117.5	24	112.0	112.3	112.6	24	112.6	113.5	114.6	24	---	---	---	0
7/30	109.6	109.8	110.1	24	116.9	118.3	120.5	24	111.4	111.8	112.5	24	113.5	113.9	114.3	24	---	---	---	0
7/31	109.1	109.4	110.1	24	116.3	116.7	117.4	24	110.8	111.1	111.2	24	113.7	114.3	115.1	24	---	---	---	0
8/1	109.7	110.3	110.8	24	116.5	116.7	117.1	24	111.2	111.5	111.8	24	113.4	113.9	114.5	24	---	---	---	0
8/2	110.4	110.7	110.8	22	116.3	116.7	117.4	22	111.2	111.5	111.6	22	113.7	114.0	114.4	22	---	---	---	0

Total Dissolved Gas Saturation (%) - Average of 12 Highest Hours, 24 h Average and 24 h High

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>McNary-Wash</u>			#	<u>McNary Tlwr</u>			#	<u>John Day</u>			#	<u>John Day Tlwr</u>			#	<u>The Dalles</u>			#
	<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>	
7/20	115.2	115.8	116.8	24	120.7	121.5	122.3	24	114.3	115.0	115.6	24	117.2	118.6	119.4	24	111.4	112.4	113.4	24
7/21	113.7	114.4	115.0	24	121.3	122.3	122.9	22	112.6	112.9	113.1	24	118.3	118.7	118.8	24	113.1	114.8	116.6	24
7/22	115.5	116.3	116.9	24	121.1	122.0	122.5	24	111.9	112.2	112.2	24	118.6	119.2	119.3	24	112.1	112.8	113.2	24
7/23	114.2	114.8	115.1	24	120.7	121.3	121.6	24	109.5	109.8	110.6	24	117.4	117.9	118.9	24	110.8	111.7	113.2	24
7/24	114.8	115.8	116.9	24	120.2	120.7	121.2	24	111.0	112.4	113.1	24	116.3	117.1	118.1	24	110.9	112.0	112.9	24
7/25	117.7	118.8	119.7	24	119.3	119.9	120.2	24	113.5	113.9	114.4	24	115.7	116.2	116.9	24	112.9	113.4	113.8	24
7/26	118.8	119.0	119.4	17	120.6	121.1	123.0	15	113.3	113.4	114.1	14	115.2	115.6	119.0	14	113.0	113.2	113.8	14
7/27	118.4	118.7	119.0	24	119.3	119.6	119.8	18	116.2	116.5	116.9	18	115.6	116.1	118.4	18	111.2	111.5	112.3	18
7/28	115.2	115.6	117.1	24	118.4	118.6	119.0	24	113.8	114.3	115.0	24	115.1	116.2	117.7	24	110.9	111.8	113.2	24
7/29	112.9	113.8	114.5	24	118.5	118.8	119.0	24	111.5	111.8	112.5	24	116.1	117.1	118.6	24	112.0	113.2	114.4	24
7/30	113.5	113.9	114.1	24	118.7	119.3	120.0	24	109.6	109.9	110.6	24	116.5	117.5	117.7	24	110.0	111.3	113.7	24
7/31	112.7	113.1	113.6	24	118.1	118.5	118.9	24	107.6	107.9	108.4	24	117.4	118.1	118.7	24	109.4	109.8	110.3	24
8/1	112.3	112.7	112.9	24	118.2	118.6	119.1	24	107.5	108.0	108.2	24	113.8	114.6	115.2	24	109.9	110.5	111.1	24
8/2	113.0	113.2	113.5	22	118.0	118.5	119.2	23	107.2	107.4	107.6	22	114.0	114.8	117.9	22	107.7	108.0	108.8	22

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>			#	<u>Bonneville</u>			#	<u>Warrendale</u>			#	<u>CamasWashougal</u>			#	<u>Cascade Island</u>			#
	<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>	
7/20	117.4	118.3	120.3	24	112.1	112.7	114.2	24	113.8	114.6	115.1	24	112.0	112.3	112.7	24	117.9	119.4	120.0	24
7/21	120.4	121.9	125.7	24	113.9	115.3	116.0	24	116.5	117.4	118.2	24	113.6	115.4	116.1	24	122.6	123.1	123.5	24
7/22	119.1	120.4	122.5	24	116.3	118.1	120.4	24	117.8	119.1	120.2	24	115.8	116.5	117.5	24	121.9	123.2	123.8	24
7/23	118.0	118.9	119.9	24	112.8	113.5	114.2	24	115.9	116.3	116.5	24	113.9	114.6	114.9	24	121.9	123.1	123.3	24
7/24	117.6	118.2	118.8	24	114.8	115.6	116.1	24	119.8	122.7	123.2	24	115.2	116.6	117.7	24	122.4	122.9	123.2	24
7/25	118.3	118.7	119.0	24	115.4	115.8	116.2	24	117.0	118.3	123.2	24	117.9	119.1	120.6	24	117.6	118.8	122.6	24
7/26	118.1	118.3	119.1	14	114.9	115.0	115.2	14	115.8	116.0	117.1	14	113.6	113.7	114.7	14	117.7	118.0	120.2	14
7/27	116.5	116.9	117.4	18	111.4	111.9	112.9	18	113.3	113.5	114.6	18	112.8	113.2	114.0	18	118.0	118.8	120.5	18
7/28	118.0	119.4	123.2	24	109.8	110.0	110.1	24	112.7	113.4	114.5	24	111.9	113.1	114.4	24	116.3	117.8	119.7	24
7/29	118.7	119.9	124.3	24	111.3	111.9	112.7	24	113.2	113.7	114.2	24	111.3	112.8	114.0	24	116.6	118.0	120.4	24
7/30	117.6	119.2	124.5	24	110.7	111.3	112.3	24	113.8	114.7	114.9	24	111.6	112.7	113.9	24	119.1	120.6	122.1	24
7/31	116.9	118.2	119.3	24	110.7	111.3	112.3	24	114.8	116.1	116.9	24	114.2	116.1	118.5	24	120.6	122.3	123.1	24
8/1	116.2	117.2	117.8	24	109.7	109.8	110.0	24	112.7	114.0	115.6	24	115.0	116.3	117.4	24	117.3	118.9	122.0	24
8/2	114.8	115.2	115.7	22	109.3	109.5	110.0	22	112.4	113.0	113.6	22	110.8	112.1	113.6	22	116.7	117.6	119.8	22

Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 8/3/2012 8:17

Two-Week Summary of Passage Indices

* One or more of the sites on this date had an incomplete or biased sample.

See Sampling Comments: <http://www.fpc.org/currentDaily/smpcomments.htm>

For clip information see: <http://www.fpc.org/CurrentDaily/catch.htm>

For sockeye and yearling chinook (Snake only) race information see: <http://www.fpc.org/smoltqueries/currentsmppsubmitdata.asp>

COMBINED YEARLING CHINOOK											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
07/20/2012	*	---	13	---	---	0	14	8	0	0	0
07/21/2012	*	---	---	---	---	0	20	16	0	---	0
07/22/2012	*	---	---	---	---	0	0	8	0	0	218
07/23/2012	*	---	2	---	---	0	8	15	0	---	0
07/24/2012	*	---	3	---	---	0	0	0	0	0	0
07/25/2012	*	---	2	---	---	0	0	30	0	---	0
07/26/2012	*	---	2	---	---	0	3	0	0	2	0
07/27/2012	*	---	2	---	---	0	30	38	0	---	0
07/28/2012	*	---	---	---	---	0	19	8	0	0	0
07/29/2012	*	---	---	---	---	0	0	35	0	---	0
07/30/2012	*	---	1	---	---	0	3	11	0	0	0
07/31/2012	*	---	2	---	---	4	0	0	0	---	0
08/01/2012	*	---	---	---	---	0	0	0	0	0	0
08/02/2012	*	---	---	---	---	0	0	9	0	---	102
08/03/2012	*	---	---	---	---	---	---	---	---	---	---
Total:		0	27	0	0	4	97	178	0	2	218
# Days:		0	8	0	0	14	14	14	14	7	14
Average:		0	3	0	0	0	7	13	0	0	16
YTD		58,098	10,919	26,417	13,494	4,042,638	2,265,983	754,562	25,797	2,179,373	4,290,476

COMBINED SUBYEARLING CHINOOK											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
07/20/2012	*	---	0	---	---	4,179	4,001	714	433	218,514	110,993
07/21/2012	*	---	---	---	---	3,593	2,520	496	480	---	139,435
07/22/2012	*	---	---	---	---	3,788	2,444	890	493	75,491	159,887
07/23/2012	*	---	0	---	---	2,207	1,371	170	530	---	100,703
07/24/2012	*	---	0	---	---	1,403	779	389	543	57,053	88,536
07/25/2012	*	---	0	---	---	1,771	946	351	479	---	66,548
07/26/2012	*	---	0	---	---	2,309	1,355	207	475	81,852	50,774
07/27/2012	*	---	0	---	---	2,442	5,280	878	577	---	80,963
07/28/2012	*	---	---	---	---	2,066	2,949	1,048	743	83,896	78,607
07/29/2012	*	---	---	---	---	1,184	1,353	1,056	455	---	63,385
07/30/2012	*	---	1	---	---	1,239	1,567	814	300	103,676	39,254
07/31/2012	*	---	0	---	---	1,283	1,129	344	348	---	37,136
08/01/2012	*	---	---	---	---	1,129	1,598	341	239	84,317	18,679
08/02/2012	*	---	---	---	---	1,039	1,349	548	249	---	18,609
08/03/2012	*	---	---	---	---	---	---	---	---	---	---
Total:		0	1	0	0	29,632	28,641	8,246	6,344	704,799	1,053,509
# Days:		0	8	0	0	14	14	14	14	7	14
Average:		0	0	0	0	2,117	2,046	589	453	100,686	75,251
YTD		0	4	67	327	1,047,229	1,029,765	371,267	25,463	2,604,933	3,697,741

Two-Week Summary of Passage Indices

COMBINED COHO											
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
07/20/2012	*	---	0	---	---	0	0	0	4	0	0
07/21/2012	*	---	---	---	---	0	0	0	0	---	0
07/22/2012	*	---	---	---	---	0	0	0	2	0	0
07/23/2012	*	---	0	---	---	0	0	0	4	---	0
07/24/2012	*	---	0	---	---	0	0	0	16	3	0
07/25/2012	*	---	0	---	---	0	0	0	6	---	0
07/26/2012	*	---	0	---	---	0	3	0	6	0	0
07/27/2012	*	---	0	---	---	0	0	8	12	---	305
07/28/2012	*	---	---	---	---	8	0	0	6	0	0
07/29/2012	*	---	---	---	---	0	0	0	6	---	0
07/30/2012	*	---	0	---	---	0	0	0	5	0	0
07/31/2012	*	---	0	---	---	0	3	0	13	---	0
08/01/2012	*	---	---	---	---	0	0	0	3	0	0
08/02/2012	*	---	---	---	---	4	0	0	2	---	0
08/03/2012	*	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	12	6	8	85	3	305
# Days:		0	8	0	0	14	14	14	14	7	14
Average:		0	0	0	0	1	0	1	6	0	22
YTD		0	0	0	80	69,775	78,617	19,961	49,597	145,764	287,512

COMBINED STEELHEAD											
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
07/20/2012	*	---	2	---	---	0	0	0	6	0	0
07/21/2012	*	---	---	---	---	0	41	0	8	---	0
07/22/2012	*	---	---	---	---	0	17	0	4	0	0
07/23/2012	*	---	0	---	---	10	0	0	6	---	0
07/24/2012	*	---	2	---	---	0	7	0	4	0	0
07/25/2012	*	---	2	---	---	8	3	0	6	---	0
07/26/2012	*	---	0	---	---	0	14	0	8	0	0
07/27/2012	*	---	0	---	---	24	33	0	8	---	0
07/28/2012	*	---	---	---	---	8	10	8	4	0	0
07/29/2012	*	---	---	---	---	0	4	9	0	---	0
07/30/2012	*	---	0	---	---	4	7	33	2	0	0
07/31/2012	*	---	0	---	---	0	2	0	0	---	0
08/01/2012	*	---	---	---	---	0	3	2	0	0	0
08/02/2012	*	---	---	---	---	0	0	0	2	---	0
08/03/2012	*	---	---	---	---	---	---	---	---	---	---
Total:		0	6	0	0	54	141	52	58	0	0
# Days:		0	8	0	0	14	14	14	14	7	14
Average:		0	1	0	0	4	10	4	4	0	0
YTD		2,722	21,612	2,065	2,311	3,538,953	1,490,198	611,028	17,307	543,076	2,834,971

Two-Week Summary of Passage Indices

COMBINED SOCKEYE												
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
07/20/2012	*	---	0	---	---	0	0	0	4	244	205	0
07/21/2012	*	---	---	---	---	0	0	0	8	---	0	292
07/22/2012	*	---	---	---	---	0	0	0	8	258	0	0
07/23/2012	*	---	0	---	---	10	0	0	6	---	0	0
07/24/2012	*	---	0	---	---	0	6	0	8	258	205	0
07/25/2012	*	---	0	---	---	8	0	0	4	---	205	14
07/26/2012	*	---	0	---	---	0	0	0	14	464	0	0
07/27/2012	*	---	0	---	---	8	0	0	4	---	0	291
07/28/2012	*	---	---	---	---	0	6	0	4	224	0	0
07/29/2012	*	---	---	---	---	0	0	0	2	---	0	99
07/30/2012	*	---	0	---	---	0	0	0	2	673	0	0
07/31/2012	*	---	0	---	---	12	0	0	7	---	0	0
08/01/2012	*	---	---	---	---	8	3	0	5	0	115	208
08/02/2012	*	---	---	---	---	0	0	0	4	---	0	0
08/03/2012	*	---	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	46	15	0	80	2,121	730	904
# Days:		0	8	0	0	14	14	14	14	7	14	14
Average:		0	0	0	0	3	1	0	6	303	52	65
YTD		5	0	0	475	43,282	37,128	18,243	46,772	1,134,801	850,447	778,365

COMBINED LAMPREY JUVENILES												
	WTB	IMN	GRN	LEW	LGR†	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)
07/20/2012	*	---	0	---	---	0	10	0	1	500	1,714	0
07/21/2012	*	---	---	---	---	0	0	0	1	---	2,714	100
07/22/2012	*	---	---	---	---	0	0	0	1	1,500	2,572	4
07/23/2012	*	---	0	---	---	15	10	0	1	---	2,143	100
07/24/2012	*	---	0	---	---	4	8	4	0	700	1,286	200
07/25/2012	*	---	0	---	---	0	26	0	2	---	1,571	32
07/26/2012	*	---	0	---	---	0	14	8	0	1,400	1,143	100
07/27/2012	*	---	0	---	---	4	2	0	0	---	900	0
07/28/2012	*	---	---	---	---	0	10	4	0	800	2,143	0
07/29/2012	*	---	---	---	---	0	4	0	1	---	2,143	0
07/30/2012	*	---	0	---	---	0	20	0	3	200	1,500	0
07/31/2012	*	---	0	---	---	4	16	0	0	---	1,700	0
08/01/2012	*	---	---	---	---	0	6	0	0	700	767	20
08/02/2012	*	---	---	---	---	0	22	0	0	---	900	8
08/03/2012	*	---	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	27	148	16	10	5,800	23,196	564
# Days:		0	8	0	0	14	14	14	14	7	14	14
Average:		0	0	0	0	2	11	1	1	829	1,657	40
YTD		6	0	0	0	6,982	6,317	2,192	123	119,830	499,677	31,633

Two-Week Summary of Passage Indices

* See sampling comments <http://www.fpc.org/currentDaily/smpcomments.htm>

Smolt indices, clipped & unclipped or combined, are presented in the following order: yearling chinook (chinook 1's,) subyearling chinook (chinook 0's), steelhead, coho, sockeye, and lamprey juveniles. Two classes of fish counts are shown in these tables:

Two classes of fish counts are shown in these tables:

Collection counts (Coll), which account for sample rates but are not adjusted for flow;

Passage indices (INDEX), which are collection counts divided by the proportion of water passing through the sampled powerhouse.

Passage indices are not population estimates, but are used to adjust collection counts for daily fluctuations in the site's or project's operations.

The classes of counts presented in the report are defined below for each site. Most samples occur over a 24-hr period that spans two calendar days. In this report, the date shown corresponds with the sample end date.

Combined lamprey juvenile collection counts are provided for all sites. Combined lamprey juveniles is a combination of pacific lamprey ammocoetes, brook lamprey ammocoetes, unknown lamprey ammocoetes, pacific lamprey macrophthalmia, and unidentified lamprey species.

† Caution should be used with interpreting lamprey juvenile collection counts at LGR because of the possibility that lamprey may escape the sample tank before being sampled

Definitions for Smolt Index Counts

WTB (Collection) = Salmon River Trap at Whitebird : Collection Counts

IMN (Collection) = Imnaha River Trap : Collection Counts

GRN (Collection) = Grande Ronde River Trap : Collection Counts

LEW (Collection) = Snake River Trap at Lewiston : Collection Counts

LGR (Index) = Lower Granite Dam Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

LGS (Index) = Little Goose Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

LMN (Index) = Lower Monumental Dam Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

RIS (Index) = Rock Island Dam Second Powerhouse Bypass Trap : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse 2 Flow} / (\text{Powerhouse 1 \& 2 Flow} + \text{Spill}) \}$

MCN (Index) = McNary Dam Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

JDA (Index) = John Day Dam Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

BO2 (Index) = Bonneville Dam Second Powerhouse Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse 2 Flow} / (\text{Powerhouse 1 \& 2 Flow} + \text{Spill}) \}$

JDA and BO2 data collected for the FPC by Pacific States Marine Fisheries Commission.

RIS data collected for the FPC by Chelan Co. PUD.

LGR, LMN, and MCN data collected for the FPC by Washington Dept. of Fish and Wildlife.

LGS and GRN data collected for the FPC by Oregon Dept. of Fish and Wildlife.

IMN data collected for the FPC by the Nez Perce Tribe.

WTB and LEW data collected for the FPC by Idaho Dept. of Fish and Game.

Two Week Transportation Summary

Source: Fish Passage Center

Updated:

8/3/12 8:10 AM

		07/20/12	TO	08/03/12				
		Species						
Site	Data	CH0	CH1	CO	ST	SO	Grand Total	
LGR	Sum of NumberCollected	14,838		2	6	27	23	14,896
	Sum of NumberBarged	14,745		2	6	27	19	14,799
	Sum of NumberBypassed	1		0	0	0	3	4
	Sum of Numbertrucked	0		0	0	0	0	0
	Sum of SampleMorts	44		0	0	0	0	44
	Sum of FacilityMorts	48		0	0	0	1	49
	Sum of ResearchMorts	0		0	0	0	0	0
	Sum of TotalProjectMorts	92		0	0	0	1	93
LGS	Sum of NumberCollected	17,997		59	4	82	10	18,152
	Sum of NumberBarged	17,814		57	4	81	9	17,965
	Sum of NumberBypassed	3		0	0	0	1	4
	Sum of Numbertrucked	0		0	0	0	0	0
	Sum of SampleMorts	43		0	0	0	0	43
	Sum of FacilityMorts	137		2	0	1	0	140
	Sum of ResearchMorts	0		0	0	0	0	0
	Sum of TotalProjectMorts	180		2	0	1	0	183
LMN	Sum of NumberCollected	4,106		89	4	21		4,220
	Sum of NumberBarged	3,995		89	4	17		4,105
	Sum of NumberBypassed	24		0	0	1		25
	Sum of Numbertrucked	0		0	0	0		0
	Sum of SampleMorts	20		0	0	1		21
	Sum of FacilityMorts	67		0	0	2		69
	Sum of ResearchMorts	0		0	0	0		0
	Sum of TotalProjectMorts	87		0	0	3		90
MCN	Sum of NumberCollected	300,445			1		900	301,346
	Sum of NumberBarged	0			0		0	0
	Sum of NumberBypassed	300,325			1		900	301,226
	Sum of Numbertrucked	0			0		0	0
	Sum of SampleMorts	42			0		0	42
	Sum of FacilityMorts	78			0		0	78
	Sum of ResearchMorts	0			0		0	0
	Sum of TotalProjectMorts	120			0		0	120
Total Sum of NumberCollected		337,386		150	15	130	933	338,614
Total Sum of NumberBarged		36,554		148	14	125	28	36,869
Total Sum of NumberBypassed		300,353		0	1	1	904	301,259
Total Sum of Numbertrucked		0		0	0	0	0	0
Total Sum of SampleMorts		149		0	0	1	0	150
Total Sum of FacilityMorts		330		2	0	3	1	336
Total Sum of ResearchMorts		0		0	0	0	0	0
Total Sum of TotalProjectMorts		479		2	0	4	1	486

YTD Transportation Summary

Source: Fish Passage Center

Updated:

8/3/12 8:10 AM

TO: 08/03/12

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	661,663	2,693,475	47,641	30,573	2,353,353	5,786,705
	Sum of NumberBarged	648,051	989,033	39,441	29,076	949,605	2,655,206
	Sum of NumberBypassed	11,455	1,702,758	8,165	1,425	1,403,470	3,127,273
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	344	180	2	9	61	596
	Sum of FacilityMorts	1,813	1,429	33	63	182	3,520
	Sum of ResearchMorts	0	75	0	0	35	110
	Sum of TotalProjectMorts	2,157	1,684	35	72	278	4,226
LGS	Sum of NumberCollected	650,161	1,498,480	53,300	25,709	971,190	3,198,840
	Sum of NumberBarged	649,224	1,109,485	51,697	25,012	683,495	2,518,913
	Sum of NumberBypassed	121	388,249	1,601	690	287,507	678,168
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	109	30	0	2	15	156
	Sum of FacilityMorts	707	716	2	5	173	1,603
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	816	746	2	7	188	1,759
LMN	Sum of NumberCollected	247,565	543,386	14,385	13,396	438,624	1,257,356
	Sum of NumberBarged	234,027	531,272	14,356	13,372	428,316	1,221,343
	Sum of NumberBypassed	12,925	11,582	19	13	9,826	34,365
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	97	60	0	3	36	196
	Sum of FacilityMorts	516	472	10	8	149	1,155
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	613	532	10	11	185	1,351
MCN	Sum of NumberCollected	1,022,220	1,040,137	72,876	555,239	247,888	2,938,360
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	1,021,924	1,039,959	72,876	555,164	247,862	2,937,785
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	136	43	0	28	10	217
	Sum of FacilityMorts	160	135	0	47	16	358
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	296	178	0	75	26	575
Total Sum of NumberCollected		2,581,609	5,775,478	188,202	624,917	4,011,055	13,181,261
Total Sum of NumberBarged		1,531,302	2,629,790	105,494	67,460	2,061,416	6,395,462
Total Sum of NumberBypassed		1,046,425	3,142,548	82,661	557,292	1,948,665	6,777,591
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		686	313	2	42	122	1,165
Total Sum of FacilityMorts		3,196	2,752	45	123	520	6,636
Total Sum of ResearchMorts		0	75	0	0	35	110
Total Sum of TotalProjectMorts		3,882	3,140	47	165	677	7,911

Cumulative Adult Passage at Mainstem Dams Through: 08/03

DAM	EndDate	Spring Chinook						Summer Chinook						Fall Chinook					
		2012		2011		10-Yr Avg.		2012		2011		10-Yr Avg.		2012		2011		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	08/02	158075	7591	167097	50945	152015	20110	81663	12235	108279	51451	92437	17241	1181	386	970	396	778	143
TDA	08/02	117071	7173	124164	40146	112195	16495	68780	10245	80722	39640	78917	13449	0	0	0	0	0	0
JDA	08/02	107655	6755	103401	39823	94492	15370	59720	10144	74071	34843	71569	13960	0	0	0	0	0	0
MCN	08/02	102763	4787	101246	31750	86252	13687	62245	4733	71406	27330	66372	10754	0	0	0	0	0	0
IHR	08/02	71957	2905	69306	18161	60108	8392	13761	1378	25932	12227	18644	4369	0	0	0	0	0	0
LMN	08/02	68608	2891	69832	18094	58469	7193	14686	1503	30433	13559	19646	4198	0	0	0	0	0	0
LGS	08/02	68247	3449	67321	23492	54053	8198	14032	1544	40916	17899	17955	4959	0	0	0	0	0	0
LGR	08/02	66366	3525	59342	22063	54084	9639	12508	1616	35643	16162	16684	5531	0	0	0	0	0	0
PRD	07/30	19495	1015	15246	6030	16630	1325	44730	801	42059	2807	53223	1869	0	0	0	0	0	0
RIS	07/30	19881	800	13089	8394	14658	2236	43546	1466	34215	11301	48385	4308	0	0	0	0	0	0
RRH	07/30	6641	459	6989	3491	5643	822	35090	1358	27147	6133	34598	3236	0	0	0	0	0	0
WEL	07/29	5311	700	4153	3969	4833	817	23646	1682	18204	4029	22612	1242	0	0	0	0	0	0
WFA	07/28	35605	1288	43304	1367	50481	1058	-	-	-	-	-	0	0	0	0	0	0	0

DAM	Coho						Sockeye			Steelhead					
	2012		2011		10-Yr Avg.		2012	2011	10-Yr Avg.	2012	2011	10-Yr Avg.	Wild 2012	Wild 2011	10-Yr Avg.
	Adult	Jack	Adult	Jack	Adult	Jack									
BON	9	4	4	4	1	0	515547	185685	130900	94366	121823	123594	40763	57904	51779
TDA	8	0	2	2	0	0	409904	138153	109245	58627	73270	58673	26906	36894	26971
JDA	9	0	0	1	0	0	393910	143325	113716	34919	45557	44454	16889	23898	19520
MCN	-1	0	0	0	0	0	363912	113477	93184	24469	25394	29028	10197	11417	11565
IHR	0	0	0	0	0	0	449	1112	389	6344	15134	16190	2104	5220	4944
LMN	0	0	0	0	0	0	473	1359	484	7205	12750	14122	3087	5226	4980
LGS	0	0	0	0	0	0	432	1394	460	5590	10990	8612	3036	5216	3323
LGR	0	0	0	0	0	0	430	1457	561	10301	16072	14087	4545	7304	4676
PRD	1	0	0	0	1	0	406401	142722	118036	2036	1064	2715	0	0	0
RIS	0	0	0	0	0	0	406489	141561	114569	1572	855	1880	870	526	1187
RRH	0	0	0	0	0	0	358241	126810	93226	1622	1038	1432	1027	741	844
WEL	0	0	0	0	0	0	314080	100700	88832	621	311	563	341	215	328
WFA	0	0	0	0	0	0	-	-	-	28668	26913	26657	-	-	-

PRD does not post wild steelhead numbers. These numbers were collected from USACE, Grant PUD, Douglas PUD, Chelan PUD, ODFW and DART. Wild steelhead numbers are included in the total. Wild Steelhead are defined as unclipped fish. Historic counts (pre-1996) were obtained from CRITFC and compiled by the FPC. Historic counts 1997 to present were obtained from the Corps of Engineers.

Page last updated on: 08/03/12

BON counts from January 1, 2012 to March 14, 2012 (historical counts begin March 15):

Year	Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
2012	12	1	1,471	497
2011	47	0	1,370	580

Gas Bubble Trauma Monitoring Results from Representative Sites on the Snake River and Columbia River

Site	Date	Species	Number of Fish	Number w GBT signs	Number w Fin Signs	% Fin GBT	% Severe Fin GBT	Number of Fish with Fin GBT Listed by Highest Rank			
								Rank 1	Rank 2	Rank 3	Rank 4
Lower Granite Dam											
Little Goose Dam											
	07/23/12	Chinook + Steelhead	12	0	0	0.00%	0.00%	0	0	0	0
	07/30/12	Chinook + Steelhead	27	0	0	0.00%	0.00%	0	0	0	0
Lower Monumental Dam											
	07/25/12	Chinook + Steelhead	3	0	0	0.00%	0.00%	0	0	0	0
	08/01/12	Chinook + Steelhead	22	0	0	0.00%	0.00%	0	0	0	0
McNary Dam											
	07/23/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/27/12	Chinook + Steelhead	100	2	2	2.00%	0.00%	2	0	0	0
	07/29/12	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	08/02/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	07/21/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/24/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/28/12	Chinook + Steelhead	64	0	0	0.00%	0.00%	0	0	0	0
	08/01/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Rock Island Dam											
	07/24/12	Chinook + Steelhead	100	2	2	2.00%	0.00%	2	0	0	0
	07/27/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/31/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/02/12	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0